

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-2, 4, 6-15 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:
The art of record does not suggest the respective claim combinations together and nor would the respective claim combinations be obvious with:
3. As per claim 1: A method for detecting unbalanced conditions of a rotating load driven by a Synchronous electric motor in washing machines and similar household appliances including rotatable drum and wherein at least a transient step is provided with angular speed variation of the rotatable drum, by the method comprising the following steps: constantly monitoring and detecting the instantaneous current absorbed by the motor; calculating in real time the value of an unbalanced mass on the basis of the variation of said current and starting from a predetermined reference obtained by experimental results and by applying a calculation formula representative of the kind of load imbalance; checking that said value of unbalanced mass is lower than a predetermined acceptable reference value and slowing down the angular speed of Said drum in case of negative result; said current driving as a feedback signal said motor according to said value of imbalanced mass adjusting the angular revolution speed of the motor in real or continuous time, wherein an imbalance signal is computed as a difference between the last sampled value of the current signal, in the time instant wherein the absolute value of the first derivative of said current signal is less than a predetermined threshold and the second derivative of the same signal is positive, and the last sampled value of said current signal in the time instant

wherein the absolute value of the first derivate of said current signal is less than a predetermined threshold and the second derivate of the same signal is negative.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Luo whose telephone number is (571)270-5251. The examiner can normally be reached on M-F 9AM-6PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on (571)272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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